

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

What is claimed is:

1. (Currently Amended) A method for ~~digitally~~ storing a received program, comprising:
 - storing, by a computing device, the ~~entire~~ received program as a first digital copy having a first quality level on a storage medium;
 - converting, by the computing device, the first digital copy into a second digital copy of the ~~entire~~ received program, having a second quality level of ~~lesser~~ lower quality than the first quality level;
 - storing, by the computing device, the second digital copy ~~simultaneously~~ along with the first digital copy on the storage medium; ~~the simultaneous storage rendering both copies available for a potential replaying for a user at a later time; and~~
 - determining periodically, by the computing device, space left available in the storage medium; and
 - after a period of time during which both copies are available for a potential replaying for a user, applying, by the computing device, a retention policy which instructs deletion of at least a selected one of the stored first and second digital copies based at least in part on a result of said determining.
2. (Previously Presented) The method of claim 1, further comprising:
 - receiving, by the computing device, a request to schedule a recording of the program;
 - determining, by the computing device, a recording quality and a longevity for the program; and
 - associating, by the computing device, the recording quality and longevity with the program;

wherein applying the retention policy is performed based at least in part on the associated desired longevity.

3. (Original) The method of claim 2, wherein the recording quality comprises high, medium and low quality.

4. (Original) The method of claim 2, wherein determining the quality and longevity comprises a selected one of: utilizing a default quality and longevity or prompting for the desired quality and longevity.

5. (Currently Amended) The method of claim 2, wherein longevity comprises long, medium, and temporary, and wherein applying the retention policy further comprises comparing associated quality settings and longevity to determine which stored copy of ~~a~~the program is to be deleted.

6. (Currently Amended) The method of claim 1, further comprising:
receiving, by the computing device, a request to schedule a recording of the program, the request having an associated quality to utilize for recording the program;

inferring, by the computing device, a longevity for the recording based on the associated quality;

periodically, during the inferred longevity, selecting, by the computing device, a stored copy of the program and determining a ~~lesser~~lower quality for the ~~stored~~selected copy based at least in part on how ~~long~~much of the inferred longevity has been covered by the selectedstored copy ~~has been stored~~; and

degrading, by the computing device, the ~~stored~~selected copy of the program in accordance with the ~~lesser~~lower quality.

7. (Previously Presented) The method of claim 1, further comprising:

determining, by the computing device, a bitrate and an encoding format for the first and second digital copies, wherein the first and second quality levels are determined based at least in part on the bitrate and the encoding format utilized.

8. (Original) The method of claim 1, wherein the first and second quality levels are determined based at least in part on a bitrate utilized to encode the first and second digital copies.

9. (Original) The method of claim 1, wherein the first and second quality levels are determined based at least in part on an encoding format utilized to encode the first and second digital copies.

10. (Currently Amended) The method of claim 1, further comprising:

converting, by the computing device, the first digital copy into a third digital copy having a third quality level of ~~lesser~~lower quality than the second quality level; and

storing, by the computing device, the third digital copy ~~simultaneously along with a selected one of the first digital copy and the second digital copy or both the first and second digital copies on the storage medium; the simultaneous storage rendering multiple copies available for a potential replaying for a user at a later time;~~

after a period of time during which multiple copies are available for a potential replaying for a user, deleting, by the computing device, at least ~~a selected one of the stored first, second, and third digital copies~~ in accordance with the retention policy based at least in part on another result from said determining.

11. (Currently Amended) The method of claim 1, further comprising:

converting, by the computing device, the second digital copy into a third digital copy having a third quality level of ~~lesser~~lower quality than the second quality level; and

storing, by the computing device, the third digital copy simultaneously with a selected one of the first digital copy ~~and~~ the second digital copy or both the first and second digital copies ~~on the storage medium, the simultaneous storage rendering multiple copies available for a potential replaying for a user at a later time;~~

after a period of time during which multiple copies are available for a potential replaying for a user, deleting, by the computing device, at least ~~a selected one of the stored first, second, and third digital copies~~ in accordance with the retention policy based at least in part on another result from said determining.

12. (Currently Amended) A method for ~~digitally~~ storing a received program, comprising:

receiving, by a computing device, a first program;

first converting, by the computing device, the ~~entire~~ first program into a first higher quality copy and a first lower quality copy, and storing the first higher quality copy along with the first lower quality copy in a storage medium; ~~simultaneously, the simultaneous storage rendering both copies available for a potential replaying for a user at a later time;~~

determining periodically, by the computing device, whether there is insufficient space in the storage for storing a second higher quality copy for a second program; and

after a period of time during which both copies are available for a potential replaying for a user, deleting, by the computing device, at least one of the first higher quality copy and the first lower quality copy ~~to make room within the storage for storing the second higher quality copy~~ based at least in part on a result of said determining.

13. (Original) The method of claim 12, wherein stored copies of the first program each have an associated retention policy, and wherein the deleting the at least one of the first higher quality copy and the first lower quality copy is performed based at least in part on said associated retention policies.

14. (Previously Presented) The method of claim 13, wherein the deleting the at least one of the first higher quality copy and the first lower quality copy is performed based at least in part on storage requirements for the second higher quality copy of the second program.

15. (Previously Presented) The method of claim 12, wherein the deleting the at least one of the first higher quality copy and the first lower quality copy is performed based at least in part on storage requirements for the second higher quality copy of the second program.

16. (Currently Amended) The method of claim 12, further comprising:
receiving, by the computing device, the second program;
second converting, by the computing device, the second program into the second higher quality copy and a second lower quality copy; and
storing, by the computing device, the second higher and lower quality copies in the storage medium. ~~simultaneously, the simultaneous storage rendering both copies available for a potential replaying for a user at a later time.~~

17. (Previously Presented) The method of claim 12, further comprising:
determining, by the computing device, a first quality level associated with the first program, wherein converting the first program into the first higher quality copy comprises encoding the first program with a bit rate determined based at least in part on the first quality level.

18. (Previously Presented) The method of claim 12, further comprising:
applying, by the computing device, selected ones of global policies to all stored copies;
and
altering, by the computing device, the stored programs in accord with a selected global policy.

19. (Currently Amended) A personal video recorder (PVR), comprising:

a video encoder configured to encode an input signal corresponding to a program into a higher quality copy of the ~~entire program~~ and store the higher quality copy on for storage in a storage medium;

a transcoder configured to convert ~~in the storage~~ the higher quality copy of the program into at least one copy of the ~~entire program~~ with lesser lower quality ~~for simultaneous stored storage~~ along with the higher quality copy ~~of the program on the storage medium;~~ the simultaneous storage rendering both copies available for a potential replaying for a user; and

a storage manager configured to determine periodically space left available in the storage medium inspect the policies within a policy store associated with the storage manager, and to apply selected ones of the policies a policy to delete one or more copies of the program based at least in part on a result of the determination. so as to manage consumption of the storage.

20. (Currently amended) The PVR of claim 19, wherein the transcoder stores the higher and at least one lesser lower quality copies of the program as components of a scalable bitstream.

21. (Currently amended) The PVR of claim 19, wherein applying a policy ~~selected one of the policies by the storage manager~~ includes the storage manager deleting the higher quality copy of the program from the storage after a period of time during which both copies are available for a potential replaying for a user.

22. (Previously Presented) The PVR of claim 19, further comprising:
a video decoder configured to be used in conjunction with retrieving a best available copy of the program from the storage, configured to convert the best available copy of the program into an output format suitable for presentation to a display.

23. (Currently Amended) An article of manufacture comprising
a storage medium for ~~digitally~~ storing a received program; and
a plurality of programming instructions designed to program an apparatus and upon

execution of the programming instructions, enable the apparatus to

store in ~~a~~ the storage medium ~~the entire~~ received program as a first digital copy having a first quality level;

convert the first digital copy into a second digital copy of the ~~entire~~ received program having a second quality level lower ~~of lesser quality~~ than the first quality level;

~~simultaneously~~ store the second digital copy in the storage medium along with the first digital copy; ~~the simultaneous storage rendering both copies available for a potential replaying for a user; and~~

determine periodically space left available in the storage medium; and
after a period of time during which both copies are available for a potential replaying for a user, apply a retention policy which instructs deletion of at least selected ones of the stored first and second digital copies based at least in part on a result of the determination.

24. (Currently amended) The article of claim 23, wherein the programming instructions are further designed to, upon execution, enable the apparatus:

receive a request to schedule a recording of the program;
determine a desired recording quality and a longevity for the program; and
associate the quality and longevity with the program, wherein the data, which when executed applies the retention policy, further includes data for applying the retention policy based at least in part on the associated desired longevity.

25. (Currently amended) The article of claim 23, wherein the programming instructions are further designed to, upon execution, enable the apparatus:

determine a first bitrate for encoding the first digital copy; and
determine a second bitrate for encoding the second digital copy;
wherein the first and second quality levels are respectively determined based at least in part on the first and second bitrates.

26. (Currently Amended) An article of manufacture comprising
a storage medium for digitally storing a received program; and
a plurality of programming instructions designed to program an apparatus and upon execution by the apparatus, enable the apparatus to:
receive a first program;
first convert the entire first program into a first higher quality copy and a first lower quality copy, and storing the first higher quality copy along with the first lower quality copy in a the storage medium; ~~simultaneously, the simultaneous storage rendering both copies available for a potential replaying for a user at a later time;~~
determine periodically whether there is insufficient space in the storage for storing a second higher quality copy for a second program; and
after a period of time during which both copies are available for a potential replaying for a user, delete at least one of the first higher quality copy and the first lower quality copy ~~to make room within the storage for storing the second higher quality copy~~ based at least in part on a result of the determination.

27. (Currently Amended) The article of claim 26, wherein the programming instructions are further designed to, upon execution, enable the apparatus to:
receive the second program;
convert the second program into the second higher quality copy and a second lower quality copy; and
store the second higher and lower quality copies in the storage medium; ~~simultaneously, the simultaneous storage rendering both copies available for a potential replaying for a user at a later time.~~

28. (Currently amended) The article of claim 26, wherein the programming instructions are further designed to, upon execution, enable the apparatus:
apply selected ones of global policies to all stored copies; and
alter the stored programs in accord with a selected global policy.